

(19) 世界知的所有権機関  
国際事務局



(43) 国際公開日  
2001 年 4 月 12 日 (12.04.2001)

PCT

(10) 国際公開番号  
WO 01/25475 A1

- (51) 国際特許分類: C12Q 1/26, 1/37, G01N 30/88 (74) 代理人: 平木祐輔, 外(HIRAKI, Yusuke et al.); 〒105-0001 東京都港区虎ノ門一丁目17番1号 虎ノ門5森ビル3階 Tokyo (JP).
- (21) 国際出願番号: PCT/JP00/06808
- (22) 国際出願日: 2000 年 9 月 29 日 (29.09.2000) (81) 指定国 (国内): US.
- (25) 国際出願の言語: 日本語 (84) 指定国 (広域): ヨーロッパ特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).
- (26) 国際公開の言語: 日本語
- (30) 優先権データ: 特願平11/280941 1999 年 10 月 1 日 (01.10.1999) JP
- (71) 出願人 (米国を除く全ての指定国について): キッコーマン株式会社 (KIKKOMAN CORPORATION) [JP/JP]; 〒278-8601 千葉県野田市野田250番地 Chiba (JP).

添付公開書類:  
— 国際調査報告書

2 文字コード及び他の略語については、定期発行される各 PCT ガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

- (71) 出願人 および  
(72) 発明者: 坂上 了一 (SAKAUE, Ryoichi) [JP/JP]. 荒井 あゆみ (ARAI, Ayumi) [JP/JP]. 梶山 直樹 (KAJIYAMA, Naoki) [JP/JP]. 小山 泰二 (KOYAMA, Yasuji) [JP/JP]; 〒278-8601 千葉県野田市野田250番地 キッコーマン株式会社内 Chiba (JP).

(54) Title: METHOD OF ASSAYING GLYCOPROTEIN

(54) 発明の名称: 糖化蛋白質の測定方法

(57) Abstract: A novel method of accurately assaying a glycoprotein by a simple procedure within a short period of time on the basis of a principle different from the existing enzymatic method. A method of assaying a glycoprotein in a sample which comprises treating the sample containing the glycoprotein with a protease, thus releasing glycopeptides (preferably  $\alpha$ -glycopeptides and still preferably  $\alpha$ -glycodipeptides) from the glycoprotein, treating these released glycopeptides with an oxidase, and assaying the hydrogen peroxide thus formed; and an assay reagent kit to be used in the enzymatic method.

(57) 要約:

既存の酵素的方法とは異なる原理に基づく、簡単な操作で、短時間でしかも精度よく糖化蛋白質を測定する新規な方法を提供する。

糖化蛋白質を含む試料をプロテアーゼで処理し、糖化蛋白質から糖化ペプチド、好ましくは $\alpha$ -糖化ペプチド、特に好ましくは $\alpha$ -糖化ジペプチドを遊離させ、これらの遊離した糖化ペプチドにオキシダーゼを作用させ、生成する過酸化水素を測定することにより、試料中の糖化蛋白質を測定する方法、および酵素的方法に用いる測定用試薬キットである。

WO 01/25475 A1

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/13548

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C12P21/02, C12N9/24, C12Q1/34, G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C12P21/02, C12N9/24, C12Q1/34, G01N33/68

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
MEDLINE, BIOSIS/WPI (DIALOG), SwissProt/PIR/GeneSeq

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-54398 A (Asahi Chemical Industry Co., Ltd.), 27 February, 2001 (27.02.01), (Family: none)	1-8
A	JP 11-155579 A (Kikkoman Corp.), 15 June, 1999 (15.06.99), (Family: none)	1-8
A	JP 2001-955598 A (Kikkoman Corp.), 10 April, 2001 (10.04.01), & WO 01/245475 A1 (Family: none) 2001-095598 WO 01/245475	1-8

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  
08 December, 2003 (08.12.03)Date of mailing of the international search report  
24 December, 2003 (24.12.03)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.